

### **REMARKS**

Applicants thank the Examiner for reconsidering and withdrawing the previous 35 U.S.C. §103(a) rejection of claims 19-20, and 41-42 over Amschler et al., U.S. Patent 5,712,298.

#### **The Pending Claims**

After entry of the December 12, 2008 Response to the February 13, 2008 Final Office Action and the June 3, 2008 Advisory Action, claim 19, claims 20 and 36 that depend from claim 19, and claims 41-44 were pending in this application. Claims 21-35 and 37-40 were withdrawn.

In the March 6, 2009 Non-Final Office Action, the Examiner withdrew claim 36 (as not readable on the elected subject matter) and claims 43-44 (as not readable on the elected species - compound 100) from further consideration. Applicants have now withdrawn these claims without prejudice to their rejoinder and to applicants seeking patents directed to these subject matters in applications claiming the benefit and priority of this application.

As described below, applicants have added new claims 45-49. Therefore, claims 19-20, 41-42, and 45-49 are now pending in this application.

#### **The Specification Amendments**

Applicants have corrected inadvertent typographical errors at page 9, lines 19-20, in the application as filed. Specifically, applicants have replaced the recitation of moiety X as -NR<sub>6</sub>-C(O)-Y- with -N(R<sub>6</sub>)-C(O)-Y- and also replaced the recitation Y-C(O)-NR<sub>6</sub>- with -Y-C(O)-N(R<sub>6</sub>)-. These amendments make the recitations consistent with the other N(R<sub>6</sub>)

recitations in the X moieties. None of these amendments is new matter. Applicants request their entries.

### The Claim Amendments

Applicants have corrected various inadvertent typographical errors in claims 19, 41, and 43.

Applicants have amended claims 19, 41, and 43 to correct the phrase "Ar is selected from...pyraxolyl...peridinyl" to recite "Ar is selected from...pyrazolyl...piperidinyl".

Applicants have amended claims 19 and 43 to replace the recitation of moiety X as "-N(R<sub>6</sub>)-, -S(O)<sub>2</sub>-" with -N(R<sub>6</sub>)-S(O)<sub>2</sub>-. Support for these amendments can be found in the application as filed. See, e.g., page 9, line 17.

For the same reason as discussed above in connection with the Specification Amendments, applicants have amended claims 19, 41, and 43 to replace the recitation of moiety X as -NR<sub>6</sub>-C(O)-Y- with -N(R<sub>6</sub>)-C(O)-Y- and also to replace the recitation Y-C(O)-NR<sub>6</sub>- with -Y-C(O)-N(R<sub>6</sub>)-. Amended claims 19 and 41 include the recitation of moiety X as -C(O)-NH- or -NH-C(O)-. Thus, they are readable on the elected species - compound 100.

Applicants have amended 19, 41, and 43 to correct the recitation "R<sub>6</sub> is optionally substituted with up to 3 substituents independently selected from halo, hydroxy, nitro, cyano or amino" to "each R<sub>6</sub>, except hydrogen, is optionally substituted with up to 3 substituents independently selected from halo, hydroxy, nitro, cyano or amino". One of skill in the art would readily recognize that the above-described substitution applies to all substituents of R<sub>6</sub>, except hydrogen.

Applicants have amended claim 41 to correct the proviso "no more than two of R<sub>7</sub>, R<sub>8</sub>, R<sub>10</sub>, or R<sub>11</sub> comprises Ar" to "no more than two of R<sub>7</sub>, R<sub>8</sub>, R<sub>9</sub>, R<sub>10</sub>, or R<sub>11</sub> comprises Ar". In the application as filed, applicants erroneously omitted R<sub>9</sub> in this proviso. Support for this amendment can be found in the application as filed. *See, e.g.*, page 13, lines 1-9.

Applicants have further amended claim 41 to add specific moieties to the recitations of R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>8</sub>, R<sub>9</sub>, and R<sub>10</sub>. Support for these amendments can be found in the application as filed. *See, e.g.*, page 10, line 18 - page 11, line 24.

Applicants have added new claims 45-49. New claim 47 depends from new claims 45 and 46. New claim 48 depends from amended claims 19-20, 41-42, and new claims 45-46. New claim 49 depends from new claim 47.

New claim 45 corresponds to originally-filed claim 19. However, it restricts R<sub>9</sub> and R<sub>10</sub> to specific moieties, i.e., R<sub>9</sub> and R<sub>10</sub> taken together with the carbon atoms to which they are bound to form a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring. New claim 46 also corresponds to originally-filed claim 19, but it restricts R<sub>3</sub> and R<sub>4</sub> to specific moieties, i.e., R<sub>3</sub> and R<sub>4</sub> taken together with the carbon atoms to which they are bound to form a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring. Support for these new claims can be found in the application as filed. *See, e.g.*, page 10, lines 18-31. New claims 45 and 46 recite moiety X as -C(O)-NH- or -NH-C(O)-. Thus, these new claims read on the elected species - compound 100.

New claim 47 depends from new claims 45 and 46 and recites additional agents that the claimed compositions can further comprise. Thus, it reads on the elected species - compound

100. Support for this new claim can be found in the application as filed. *See, e.g.,* page 45, lines 8-23.

New claim 48 depends from amended claims 19-20, 41-42, and new claims 45-46, and restricts moiety X to -C(O)-NH- or -NH-C(O)-. Thus, it reads on the elected species - compound 100. Support for this new claim can be found in the application as filed. *See, e.g.,* page 9, lines 16-21.

New claim 49 depends from new claim 47, and restricts moiety X to -C(O)-NH- or -NH-C(O)-. Thus, it reads on the elected species - compound 100. Support for this new claim can be found in the application as filed. *See, e.g.,* page 9, lines 16-21.

None of these amendments or new claims adds new matter.

### **Rejections**

#### **35 U.S.C. §103(a) - Obviousness**

Claims 19-20 and 41-42 stand rejected under 35 U.S.C §103(a) as being allegedly obvious over Nishino et al., U.S. Patent 6,071,968 ("the '968 patent"). According to the Examiner, the '968 patent teaches (see e.g., columns 3 and 11-13) structurally similar compounds and pharmaceutical compositions to those recited in the pending claims. Specifically, the Examiner argues that among the compounds in the "generic formulae" of the '968 patent are compounds that fall within the pending claims, i.e., when X is NHCO, R<sub>1</sub> to R<sub>5</sub> are alkyl and OH, and R<sub>7</sub> to R<sub>11</sub> are H and amino. The Examiner, therefore, contends that the claimed compounds are *prima facie* obvious over the '968 patent. Applicants traverse this rejection to the extent that it is maintained over the claims, as amended.

The '968 patent does not teach or suggest the subject matter of amended claim 19 (upon which claim 20 depends). Although the '968 patent refers to a genus of compounds, all of the compounds of that genus require a para (applicants' positions  $R_3$  and  $R_9$ ) amino substitution. See the '968 patent, column 2, lines 7-28, and column 3, lines 3-48. By contrast, amended claim 19 does not recite  $R_3$  or  $R_9$  as amino moieties. Thus, rather than making amended claim 19 obvious, the '968 patent teaches away from the compounds recited in amended claim 19. One of skill in the art reading the '968 patent would only consider compounds having a para amino substitution. The skilled worker would not consider the claimed compounds. For this reason, amended claim 19 (and claim 20 that depends from it) is patentable over the '968 patent.

For the same reason, the '968 patent also does not teach or suggest the subject matter of amended claim 41 (upon which claim 42 depends). Amended claim 41 recites specific moieties for  $R_3$  and  $R_9$ , which do not include amino groups. Yet, all of the compounds of the '968 patent genus require such amino groups. Thus, again, nothing in the '968 patent would have motivated one of ordinary skill in the art to produce the compounds in applicants' claimed compositions from the genus of the '968 patent.

Moreover, amended claim 41 is patentable over Amschler et al., U.S. Patent 5,712,298 ("the '298 patent"), because the '298 patent does not teach or suggest the subject matter of amended claim 41. Although the '298 patent refers to a genus of compounds, it only provides compounds wherein at least one of its  $R_1$  and  $R_2$  (corresponding to  $R_2$ ,  $R_3$ ,  $R_4$ ,  $R_8$ ,  $R_9$ , and  $R_{10}$  of the instant application) is  $C_{1-4}$ -alkoxy which is completely or partially substituted by fluorine, and the other of its  $R_1$  and  $R_2$  is hydrogen,  $C_{1-6}$ -alkoxy,  $C_{3-7}$ -cycloalkoxy,  $C_{3-7}$ -cycloalkylmethoxy,

benzyloxy or C<sub>1-4</sub>-alkoxy which is completely or partially substituted by fluorine. Amended claim 41 recites specific moieties for R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>8</sub>, R<sub>9</sub>, or R<sub>10</sub>, which do not include a C<sub>1-4</sub>-alkoxy group, letting alone a fluorinated C<sub>1-4</sub>-alkoxy group. Thus, none of the compounds of the '298 patent genus includes the claimed compounds. Nothing in the '298 patent would have motivated one of ordinary skill in the art to produce the compounds in applicants' claimed compositions from the genus of the '298 patent.

The '968 patent also does not teach or suggest the subject matter of new claim 45 or new claim 46 (upon which new claim 47 depends). New claim 45 recites specific moieties for R<sub>9</sub> and R<sub>10</sub>, i.e., R<sub>9</sub> and R<sub>10</sub> being taken together with the carbon atoms to which they are bound to form a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring. New claim 46 recites specific moieties for R<sub>3</sub> and R<sub>4</sub>, i.e., R<sub>3</sub> and R<sub>4</sub> being taken together with the carbon atoms to which they are bound to form a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring.

Therefore, the claimed compounds require a fused ring system consisting of a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring. Although the '968 patent refers to a genus of compounds, none of the compounds of that genus includes the claimed compounds. Indeed, nothing in the '968 patent would have motivated one of ordinary skill in the art to produce the compounds in applicants' claimed compositions from the genus of the '968 patent. Therefore, new claims 45 and 46 (and new claim 47 that depends from them) are patentable over the '968 patent.

Moreover, new claims 45 and 46 (and new claim 47 that depends from them) are patentable over the '298 patent, because the '298 patent does not teach or suggest the subject matter of new claims 45-47. As discussed above, although the '298 patent refers to a genus of compounds,

it only provides compounds wherein at least one of its R<sub>1</sub> and R<sub>2</sub> (corresponding to R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub>, R<sub>8</sub>, R<sub>9</sub>, and R<sub>10</sub> of the instant application) is C<sub>1-4</sub>-alkoxy which is completely or partially substituted by fluorine, and the other of its R<sub>1</sub> and R<sub>2</sub> is hydrogen. C<sub>1-6</sub>-alkoxy, C<sub>3-7</sub>-cycloalkoxy, C<sub>3-7</sub>-cycloalkylmethoxy, benzyloxy or C<sub>1-4</sub>-alkoxy which is completely or partially substituted by fluorine, and its R<sub>3</sub> is phenyl, pyridyl, phenyl which is substituted by hydrogen, hydroxyl, halogen, cyano, carboxyl, trifluoromethyl, C<sub>1-4</sub>-alkyl, C<sub>1-4</sub>-alkoxy, C<sub>1-4</sub>-alkoxycarbonyl, C<sub>1-4</sub>-alkylcarbonyl, C<sub>1-4</sub>-alkylcarbonyloxy, amino, mono-C<sub>1-4</sub>-alkylamino, di-C<sub>1-4</sub>-alkylamino or C<sub>1-4</sub>-alkylcarbonylamino, or pyridyl which is substituted by hydrogen, hydroxyl, halogen, cyano, carboxyl, alkyl, C<sub>1-4</sub>-alkoxy, C<sub>1-4</sub>-alkoxycarbonyl, amino, or C<sub>1-4</sub>-alkyl (see the '298 patent, column 1, lines 36-62).

As discussed above, the compounds claimed in applicants' new claims require a fused ring system consisting of a 5 or 6-membered aromatic carbocyclic ring or heterocyclic ring. None of the compounds of the '298 patent genus includes the claimed compounds. Indeed, nothing in the '298 patent would have motivated one of ordinary skill in the art to produce the compounds in applicants' claimed compositions from the genus of the '298 patent.

New claim 48 depends from amended claims 19-20, 41-42, and new claims 45-46, and restricts moiety X to -C(O)-NH- or -NH-C(O)-. As discussed above, amended claims 19-20, 41-42, and new claims 45-46 are patentable over the '968 patent and the '298 patent, therefore, their dependent claim - new claim 48 - is also patentable over these two patents.

New claim 49 depends from new claim 47, and restricts moiety X to -C(O)-NH- or -NH-C(O)-. As discussed above, new claim 47 is patentable over the '968 patent and the '298 patent, therefore, its dependent claim - new claim 49 - is also patentable over these two patents.

For these foregoing reasons, applicants respectfully request that the Examiner reconsider and withdraw the obviousness rejection.

**Obviousness-Type Double Patenting - U.S. Patent 6,653,309**

The Examiner has rejected claims 19-20 and 41-42 for obviousness-type double patenting over claim 19 of U.S. Patent 6,653,309 ("the '309 patent"). The Examiner acknowledges that the conflicting claims of the instant application are not identical to claim 19 of the '309 patent. However, the Examiner alleges that claims 19-20 and 41-42 are not patentably distinct from claim 19 of the '309 patent because the definition of X in the instant claims overlaps with the corresponding definition in the '309 patent; and also the definitions of R<sub>1</sub> to R<sub>11</sub> in the instant claims are similar to those in the '309 patent.

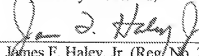
Applicants traverse. However, solely to expedite prosecution of this application, applicants submit herewith a Terminal Disclaimer in compliance with 37 C.F.R. § 1.321(c). Accordingly, the Examiner's rejection is obviated.

**Conclusion**

Applicants request that the Examiner consider the above remarks, withdraw the outstanding rejections, and allow the pending claims to issue.



Respectfully submitted,



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